

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIII. — THURSDAY, OCTOBER 7, 1875. — NO. 15.

NOTES ON THE CLIMATE OF THE ISLES OF SHOALS, AND OF NANTUCKET.

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A RESIDENCE during the months of July and August at the Isles of Shoals, and an acquaintance for several years with the summer climate of Nantucket, will perhaps justify the writer in presenting the following observations.

The group called the Isles of Shoals lies about nine miles off the New Hampshire coast, opposite the mouth of the Piscataqua River, in clear sight of York, Portsmouth, and Rye Beach. The two most important islands are Appledore, with four hundred acres, and Star, with one hundred and fifty acres. Each of these islands possesses a large hotel, and both together will receive nearly a thousand guests. Both hotels furnish excellent tables, with a liberal provision of the more simple and wholesome articles of fare. The Oceanic, on Star Island, is in its third season only, and the crowd of guests is not so great as at the Appledore; its rooms are larger, its general look more modern, and its prices a trifle higher. Neither house is at all troubled by the nuisance of fashionable dressing.

The climate of the islands during the summer months is remarkably cool, and free from great variations in respect to temperature and moisture. These qualities are of course derived from the equalizing power of the surrounding ocean. A land breeze may be distinctly felt as such, but its qualities are greatly mitigated before reaching the Isles.

It is necessary to warn visitors to provide themselves with moderately thick flannels and woolen outer garments, such as are suitable for early spring wear. These are to be worn constantly, by most people; and during the northeasterly storms, which may come even in July, a winter overcoat is needed. Last season, which was a cold one, there were several such storms; on July 5th the thermometer ranged from 53° to 58°; on July 12th from 56° to 62°. And it may be permitted to warn physicians that there are persons to whom, even in health, a temperature as low as that of these islands is a constant source of discomfort. An habitually sluggish circulation, accompanied with cold feet and hands, may prove a reason against the selection of this climate, es-

pecially as there are no drives to be taken, and scarcely a walk, and a sedentary life is the rule among the guests.

The only definite information concerning temperatures that I am able to present is derived from observations of my own, taken at Star Island from July 4th to the end of August, 1874, a season which was rather cold. During August the thermometer ranged for the most part between 60° and 70° ; during July the variations were much greater. The greatest variation observed on any one day occurred on July 14th, when the mercury stood at 66° at seven A. M., and at 81° at six P. M.; a range of 15° . In August there were a number of days on which the range did not exceed 1° or 2° . For July the total range of temperature was 28° (namely, from 53° to 81°); for August, 21° (namely, from 56° to 77°).¹

The monthly ranges for July and August, 1874, in Boston, were respectively 48° and 40° , or nearly twice as great.

Upon Star Island the mean daily range in July was $7\frac{1}{2}^{\circ}$; in August, 7° . In Boston the corresponding figures, as given by Mr. Jonathan P. Hall² for thirty-six years, assign ranges of 13° and $12\frac{3}{4}^{\circ}$ for July and August, respectively. Again a difference of nearly two to one in favor of the Isles is found.

These differences, though apparently small, are of great importance. Most of us are very susceptible to changes, and are in the habit of exaggerating the numerical statement of them. A difference of from 4° to 6° represents the difference between June and July weather, in the greater part of the United States at least; hence we may say, upon inspection of the following table, that the Isles of Shoals enjoy a June temperature, while Boston, Newport, and Nantucket are in the heats of July. A rise of 1° or 2° was quickly perceived by us at the Shoals, and was commonly supposed, by those who did not consult the instrument, to be a rise of 5° or 6° .

MONTHLY MEANS OF TEMPERATURE.

	June.	July.	August.	September.
Isles of Shoals		66.6	64.3	
Fort Constitution ⁴	61	67.1	65.1	58.9
Fort Independence ⁵	65.6	71.1	69.1	62.8

¹ Temperature was noted between seven and eight A. M., between one and two P. M., and at seven P. M., and during the few hot days my attention was frequently directed to the instrument at other times. Night temperatures, occasionally noted, showed a fall of one or two degrees between seven P. M. and midnight, or later. Thus it is probable that the absolute extremes were very nearly reached, though no self-registering instrument was used. The thermometer hung on the north side of a cottage, under a veranda, exposed to free currents of air, and protected from the direct rays of the sun.

² The observations were made at his house, near the head of Hancock Street.

³ Calculated from morning, noon, and evening observations.

⁴ This and the following temperatures are quoted from Lorin Blodget's *Climatology of the United States*, 1857. Fort Constitution is near the mouth of the Piscataqua River.

⁵ Situated upon a small island in Boston harbor.

	June.	July.	August.	September.
Nantucket	63.6	71.0	68.9	63.4
Newport	65.3	71.1	70.1	63.6
Boston	65.9	71.9	69.2	61.8
Philadelphia ¹	71.5	76	73.2	63.8
Washington	73.9	76.7	77.5	68.8

The change from an inland climate, or even that of the White Mountains, to the Shoals cannot be made suddenly without some risk. I had frequent occasion to notice the fact, and several times saw more or less severe affections of the bowels brought on by this cause. As a rule, diarrhœa scarcely occurred at all among the guests, except as a result of the very grossest carelessness and excess; there seemed something in the air which predisposed to constipation rather than the reverse. As for the drinking-water, it was drawn from a rain-water cistern, and seemed to be unobjectionable. At the Appledore they use a pump standing about one hundred and fifty feet from the house; the water varied in quality, being sometimes saltish in taste; but its absolute purity as respects sewage-matter seems certain from the excellent and thorough system of drainage, which discharges into the sea below low water, several hundred feet away from the house. Among the young children, who are quite numerous at Appledore, diarrhœa of a mild sort has been at times frequent for a week or two together; the causes of this I am unable to give. During the present year I believe this has not been the case. Among older people indigestion will sometimes punish those who think the sea-air will enable them to digest everything. A regulated, wholesome diet is as necessary here as at home. A dinner composed (for example) of clam-chowder, cucumbers, boiled mutton, green pease, tomatoes, corn, plum-pudding, ice-cream, watermelon, nuts, and raisins — which is not an unfair specimen — is possible once or twice, but makes an impression on the system in the long run.

The water is too cool for many persons to bathe in; in July it ranges from 50° to 60°, but during a few of the last days of August (1874) it rose to 70°, which is a pleasant temperature. The bathing-houses are also too directly exposed to the view, being in front of the houses and near the wharves; otherwise the pretty little inclosed basin at Appledore, containing about half an acre of water of safe depths, is decidedly attractive. The breakers never reach the bathing-places in either island. No doubt bathing would be popular if there were a good beach; for at Rye Beach the water seems to be equally cold. Dr. A. H. Nichols has kindly placed at my service his observations upon the water at that place in 1873, from which it appears that in August the water ranged from 52° to 64½°; in July it was yet colder; the observations were made at six A. M., but the water was scarcely warmer at noon.

The island of Nantucket is ten or twelve miles long from east to west,

¹ At the Pennsylvania Hospital.

and two to four in breadth ; it is reached by two hours' steaming in a southeasterly direction from Martha's Vineyard. Its northern and eastern aspects are faced with steep bluffs of sandy earth, with a narrow beach at the foot, like those of the islands in Boston harbor. Its surface is for the most part an open moor, or rolling prairie, covered with a scanty dry herbage, swept by every storm, and unable to support a vigorous growth of trees in any part except the sheltered streets of the "city."

Geologically speaking, the soil is of the drift-formation which prevails in Southeastern Massachusetts ; it is mostly a coarse sand or gravel, or a loam with a large mixture of sand ; in places there are strata of various sorts of clay, and at rare intervals a bowlder is seen. Peat-bogs are common in the depressions which have served as the beds of ponds, but of all the ponds and swamps in the island there is none which is thought to give rise to miasma, or which is near enough to the towns (of Nantucket and Siasconset) to be injurious to health. The nature of the soil makes driving difficult ; the streets of the city are generally paved with cobble-stones, and outside of the city there is not a quarter of a mile of road where a fast horse would be of any use. Neither are there any pleasant walks in the suburbs of the city ; for the moment one passes from the closely-built street one comes upon the bare, brown, turfy moor, where the roads are mere ruts through sand, and without shade. By "city" the reader is to understand the ancient and picturesque wooden town of Nantucket, which lies on the northern side of the island, fronting a very spacious and safe harbor ; it has now a population of about three thousand, though built to hold ten thousand ; there are a great many boarding-houses, and some good hotels, among which may be mentioned the Ocean House, as deserving the confidence of the traveler who wishes a good table. Siasconset is a pretty village of about sixty houses, on the southeastern face of the island, seven miles and a half from the city, with very fair accommodations, but apt to be crowded ; Nantucket is rarely over-filled.

Nantucket city possesses by no means a cool summer climate, as measured by the thermometer. During July and August one may expect, in four days out of five, a noon temperature of 70° to 80°, and an evening temperature of 60° to 70°. In hot seasons it will rise frequently to 80° or more in the hours between twelve and four, but invariably falls after this, and scarcely ever stands above 70° in the evening.¹ This considerable rise in the afternoon is due to the situation of the town, on the north of the island ; the wind is generally from the south and west, and however cool it may be upon the ocean, it becomes rapidly heated

¹ During the four years 1872-75 the thermometer in July ranged from 56° to 88°, with one exception of 54° ; in June, from 48° to 81°, with the exceptions of 43° once and 45° once. September has a temperature like June. These statements are made by Captain Charles H. Colman, who observes sunrise, noon, and sunset temperatures. The coldest day known was February 2, 1815, with 11° below zero.

in its passage of two or three miles across the open plain before reaching the town. On one such warm day (July 7, 1875) I found the water at the south shore of a temperature of 72° , the air over the ocean being the same, and as I drove back to town the atmospheric heat rose steadily to 82° . This excess of heat is not present at Siasconset, where the southerly breeze comes almost directly off the water; as a rule the hot part of the day is probably five degrees cooler there than in the city; in fact, day and night are both cooler there, and the air circulates better. A part of Nantucket city is built upon high land, thirty or forty feet above the sea, and a part is quite in a hollow; the invalid will do well, in summer, to seek the higher and breezier parts, for the climate is decidedly different.

The moisture of the air is great, and, combined with the heat, makes active muscular exertion upon land an undesirable thing. Lassitude of a luxurious sort, and a readiness to fall asleep without a particular reason, seize upon the summer visitor, whoever he may be, whether native to the island or a foreigner. Pedestrian effort, except about the streets, is next to impossible, but sailing and rowing are pleasant, and eminently safe; sitting still is certainly better, and lying down best of all, in the indolent dog-days. Judging from my own sensations, I should say that the air is less charged with moisture than at Falmouth, on the south shore of Cape Cod, with which I am quite familiar; at the village of Wood's Hole, in Falmouth, surrounded on three sides by water, the monthly mean of humidity for July last was 79.7, for August 86.7; but these high figures are certainly not representative of the state of things in Nantucket.¹ The month of September and the last half of June possess a brilliant, pungent atmosphere, equally free from damp chill and from excessive heat. East winds, by the way, are damp and chilly, as elsewhere on the New England coast, but are infrequent in the hot months.

The drinking-water is very variable in quality. Most of it is procured from wells, and no two wells are exactly alike, some being extremely sweet and soft, but most bearing a decided brackish taint, and in some cases a strong flavor of iron. It is rather common for visitors to be troubled with a slight diarrhoea, which they attribute to this cause. It would not be amiss to bring a little claret with one. Those who are not disturbed in this way are apt to experience constipation, which passes off in a few days with very little help from medicine, like the constipation which attends a life upon shipboard.

As respects drainage, there is none to speak of, most houses being dependent on common cess-pools; the soil is so light as to make frequent removals unnecessary. Typhoid fever is not at all rare, though it is not so

¹ At Falmouth and Wood's Hole the air possesses the same power to produce languor as that at Nantucket.

frequent as to excite alarm. In the closely-built parts of the city the pump is often in dangerous proximity to the cess-pool. I am unable to speak of the hotels.

The bathing at the city differs from that at Siasconset in being warmer and cleaner; freer from the *débris* of sea-weed. The water is shallow, and in certain spots is warmed by long exposure to the sun. I examined the water frequently from July 16th to 26th, and found at the "north shore" the water at 72° or 73°; in the harbor, 72° to 77°; and at Siasconset, once 67°, on a tide coming from the east, and once 70°. Neither the north shore nor the harbor has any surf; the great value of the bathing consists in the mildness of both water and air, which permits delicate persons to enter the water without a shock, and on leaving it to regain quickly their normal circulation. Except on rainy days, which are rare, one is sure to have a brilliant sun; fogs and clouds seldom interfere with the effects of the insolation. In my opinion these qualities of the bathing are of very great importance. At Siasconset, though the air is finer and more equable, the water is not so pleasant; a strong tide-current and an undertow prevail constantly, and the breakers are often dangerous, which circumstances, with the low temperature, make the bathing undesirable for delicate persons who do not "react" well. At Nantucket there is an excellent establishment for taking baths of warmed sea-water.

Finally, we may add a word as regards the comparative sanatory value of these two places, the Isles of Shoals and Nantucket. Both possess a sea-air of great purity, with the tonic effects proper to such an atmosphere. But one is a cold, the other a warm air; and it is needless to expect benefits if patients are sent without consulting their preferences as to coolness or warmth. Both are "bracing," that is, they promote languor and sleep in many cases; and this is a very valuable quality in the treatment of irritability and sleeplessness. Granting a fair degree of tolerance of cold, the equability of temperature at the Shoals is of great value in removing catarrhal conditions of the mucous membranes; and nearly the same might be said of Siasconset, but hardly of Nantucket. Granting a fair degree of tolerance of heat, the island of Nantucket, with its occasional hot-house atmosphere, its warm, unstimulating sea-baths, its freedom from the noise and excitement of the Shoals hotels, and its absolute drowsiness during the hours of *siesta*, presents advantages in the way of soothing the nerves that are superior to those possessed at the Shoals. Siasconset is still drowsier.

In the debility of retarded convalescence from acute disease, and that arising from disproportioned brain-work, these climates are admirable. Young children thrive wonderfully, wherever they can be exposed to fresh air, upon mountain or sea-shore; and the warmth of the climate furnishes no obstacle to their thriving in Nantucket.

In the first stage of consumption the Shoals are well known as beneficial. Positive improvement cannot be promised, but patients often find themselves very comfortable during their stay; the decided curative effect which is obtained in our high Western regions is not to be expected from this climate. In advanced stages the disease does badly in both places.

It is hard to say whether rheumatism is likely to be benefited by a visit to the Shoals. At Nantucket, the opinion is against sending cases of rheumatism or neuralgia to be cured; rheumatic gout is common enough, also, among the indigenes.

Hay fever is one of the complaints for which people resort to the Shoals, and is often relieved there. A strong land-breeze, however, brings a decided land-smell, and with it an occasional temporary relapse. In the opinion of Dr. Warren, relief is quite general among those who come there. At Nantucket the case is not similar.

There is plenty of evidence to show that there is nothing in a mere residence in either place that can avert disease. Upon the Shoals consumption used to be common among the women, who lived a life of severe toil, in wretchedly ventilated houses. In Nantucket, at the present day, one meets a fair number of goodly old men, vigorous and weather-stained; but the women, who constitute the great part of the population, and bear their own burdens for the most part, are strikingly delicate and worn-looking; their life is also one of in-door labor, and of close economy; they are seldom seen out-of-doors by day, and they are rather subject to consumption. Let the invalid take account of the influence of comfort; let him know how his room is warmed in chilly weather, how high it is in the walls, and how freely the air circulates; how far he has to walk to his meals; whether the meat is eatable when he gets it; whether there is anything to do, or any people one likes to talk to. In regard to the latter point, one has at Nantucket few strangers except those of a very "transient" sort, but the natives are very interesting for their good nature, originality, and accessibility; at the Shoals one finds all sorts of "city folks." There is also to be found at the Shoals a physician, of sound judgment and ripe experience, who spends his summers there on account of ill-health resulting from a railway injury.

In conclusion, it appears to me that if one is decidedly uncomfortable at either place, after a week's trial, it will be of no use to stay longer, except in case one has simply fatigued one's self with over-exertion, or with the common practice of excessive bathing.

A CASE OF TYPHLITIS, WITH SOME STATISTICS OF THE DISEASE.

BY F. GORDON MORRILL, M. D., OF BOSTON.

APRIL 3, 1875, I was asked to see A. B., a young man aged twenty-one, who was represented as being "more frightened than hurt." I found the patient in bed, and complaining of pain in the right iliac region, which was decidedly tender on pressure, and somewhat dull on percussion. The tongue was slightly coated. The abdomen was not tympanitic. There was no fever.

The history of the case was as follows: The patient returned from a journey on April 1st, and not feeling just right (his bowels having been somewhat constipated for a few days), in the evening of his arrival he went to bed after taking four "patent" pills, which purged him pretty violently towards morning. After that, he suffered from pain in the region of the cæcum, which increased steadily from the first.

I ordered one fourth of a grain of morphine, to be repeated if necessary. Lime-water and milk were prescribed on account of slight nausea.

April 4th. The pain had been relieved by the morphine, but had returned as soon as the effects of the opiate disappeared. The slightest pressure over the cæcum was very painful, and an ill-defined swelling, absolutely flat on percussion, could be detected there, apparently about the size of a large orange. The countenance was anxious. Pulse 80; temperature 103°. The nausea continued. A flaxseed poultice was applied to the swelling. The lime-water and milk were continued and the morphine was ordered, *pro re nata*.

In the afternoon, the patient was unable to pass water; he was catheterized.

April 5th. Two distinct chills occurred last night. The patient was unable to move without producing sharp pain in the right iliac fossa. The swelling was visible on inspection. Severe nausea continued. The tongue was almost as white as snow. Pulse 140; temperature 104°. There was tenderness on the slightest pressure over almost the entire abdomen; but it was more marked on the right side. I ordered eight leeches to be applied to the swelling. Small doses of champagne were given, and morphine as before.

In the afternoon the patient was delirious most of the time. Pulse 165, weak; temperature 104.6°. Dr. Swan saw the patient in consultation, and agreed with me that perforation had taken place, and that the prognosis was most unfavorable. The catheter was used morning and night.

April 6th. Dr. E. H. Clarke in consultation. The patient remained about the same. The temperature was a trifle lower. The treatment was continued.

April 7th. The bowels were very tympanitic. The patient rejected everything with the exception of an occasional teaspoonful of champagne. Turpentine stupes were ordered to be applied to the abdomen. The urine was drawn morning and night.

April 8th. The patient was rational at times, and reported himself feeling better. There was less tympanites; considerable flatus had been passed. Pulse 145; temperature 103.5°. A little beef tea was retained; about one grain of morphine was taken in twenty-four hours to relieve pain. The tenderness still remained. The catheter was resorted to as usual.

April 14th. In the interval since the last report the patient had slowly but steadily improved. No tenderness remained except in the region of the cæcum, where a slight induration could still be detected. Only one fourth of a grain of morphine had been taken in the previous twenty-four hours. A considerable quantity of champagne, beef tea, and milk was taken. The patient regained control of his bladder on the 10th. Pulse 100; temperature 100°. The patient had had no movement of the bowels since the 2d; an enema was therefore cautiously given, which brought away a few small lumps of hardened fæces, followed by quite a profuse discharge a few hours later. The patient felt weak, and suffered considerable pain afterward, but slept fairly after a dose of morphine.

April 18th. Improving. Pulse 95; temperature normal. The tongue was clean but quite red. The patient had had several natural dejections since last record; takes no morphine. The induration had disappeared, but some tenderness on pressure still remained. Friends were inclined to overfeed the man, and were warned not to give him articles of food leaving a large residue, but they did not appear to understand the importance of such extreme caution when he was apparently doing so well.

April 19th. The patient was overfed the day before, and was on this day much the worse for it; he had a large and painful movement of the bowels this morning. Pulse 105; temperature 101°. Severe pain was felt in the right iliac fossa. Leeches were again applied, and the former treatment resumed.

April 24th. The patient got rapidly better after the application of the leeches and the resumption of the liquid diet; the pulse and temperature became normal, and he gained strength every day. The diet was cautiously increased, and tonics were given. On firm pressure, very slight tenderness could still be detected in the region of the original trouble.

May 6th. Except weakness, the patient was now well.

As to the particular form of typhlitis present in this case, there is of course room for doubt; but in all probability the vermiform appendix

was the original seat of the trouble, and the lodgment of a foreign body its cause. This opinion is based on the following facts: Of eighteen fatal cases of typhlitis which I have collected from various sources,¹ in which the symptoms were similar to those present in the case here reported (namely, rapid development of serious illness, and sudden advent of acute peritonitis), in sixteen the appendix alone was found to be the part originally affected; in one, both the appendix and the cæcum were involved; in one, the cæcum alone was inflamed. In sixteen instances a foreign body was found; in two cases no such body was discovered, although in one the appendix was described as having been dilated, and looking as if it had contained one. The appendix was perforated by ulceration in fourteen of the sixteen cases in which it alone was affected; it was gangrenous in the other two.

Fourteen of the eighteen cases occurred among males. The average age was eighteen years, and the average duration a little more than eight days — a length of time very nearly corresponding to the period when my patient was sickest.

This appears to be the form of typhlitis which commonly occurs among young persons of the male sex, and usually proves rapidly fatal. In regard to the nature of foreign bodies which have been found in this and other forms of the disease, the following figures may be of interest: in thirty fatal cases which I have collected, a foreign body was found in twenty-seven; in seventeen instances it proved to be a faecal calculus; in seven instances various substances, such as pieces of bone, nut shells, seeds (found much less frequently than I had supposed), and in one instance a bristle. In three, the nature of the object discovered could not be determined. I am not sure that we are entirely justified in calling a faecal calculus "foreign" when it is found in the cæcum; if it were in the appendix the term would seem more fitting. So small an object as a bristle might easily escape notice unless a most careful search were made, and my impression is that as the appendix has no known function, it is very unlikely to inflame unless under peculiar irritation; and that if sufficient care were taken in looking for objects which may have caused trouble in cases where it has ulcerated, something, however minute, would almost always be discovered. Bartholow, who has published the most exhaustive article on this disease that I have been able to find,² states that of a large number of cases where the appendix had ulcerated, in one only did he fail to discover a foreign body.

In regard to the treatment of this disease, the rapid return of bad symptoms the moment indiscretions of diet were indulged in is a fact worth remembering.

¹ Transactions of the London Pathological Society, Reports of the Boston Society for Medical Improvement, The Lancet, and private practice of my friends.

² American Journal of the Medical Sciences, October, 1866.

The form of typhlitis in which the cæcum is the original seat of trouble appears to be far less fatal, and its course (favorable or otherwise) much more protracted, than when the appendix is affected. Of thirty fatal cases, in four only did the disease begin in the cæcum. These four cases all occurred in women; and it is my impression that this form of the disease chiefly affects female adults, an opinion which I base upon the symptoms presented in the history of cases which have recovered, as well as of those which have ended fatally. The proverbial neglect of the sex to pay proper attention to the condition of the bowels (thereby favoring the formation of faecal concretions) probably accounts for the liability of females to this trouble. That pure cæcitis should terminate fatally far less often than when the appendix is at fault, we can readily understand. The higher organization of the cæcum and its consequently greater recuperative powers render the chances of perforation much less than when the appendix is inflamed. Then again, if the trouble originates in the lodgment of a foreign body, its facilities for escape are far greater in the cæcum than in the appendix. A case recently occurred in the practice of Dr. Whittier, of this city, in which a head of wheat, which the patient (a woman aged forty-three) had inadvertently swallowed, after a lapse of six weeks was passed from the bowels, and the symptoms of severe inflammation of the cæcum at once subsided. Moreover, according to Bartholow, perforation very rarely takes place through the anterior wall, but makes its way through the gut posteriorly, and thus the immediate dangers arising from acute peritonitis are avoided. The appendix, on the other hand, is retained in place by a fold of the peritoneum; and this accounts for the rapid development of acute inflammation of this membrane when the seat of the trouble is here. As a rule, cæcitis is slow in its development, and lacks the marked symptoms which are usually present in the other form of the disease. It is usually in cases of this kind that faecal abscess occurs, ulceration of the appendix often ending fatally before pus has a chance to form or to come to the surface. Moreover, an ulcer perforating the posterior wall of the cæcum comes at once upon cellular tissue, and an abscess is very apt to be the result. That such a collection may be absorbed, and often is disposed of thus, we have abundant evidence. The pointing or rather opening of such an abscess externally is much rarer than one would naturally suppose; in forty-two fatal cases it was observed but twice.

Bartholow states that perforation of the cæcum is of frequent occurrence without being preceded by any irritation produced by a foreign body or by faecal accumulation, a point upon which I have been able to collect very little evidence. He terms this form of the disease "perforating ulcer of the cæcum," and states that such ulcers may be single or multiple, and that the same train of symptoms is present when

the ulcer has made its way through the bowel as are produced in ulceration of the appendix. The only cases which I have been able to find at all answering his description were those in which ulcers had perforated the cæcum as a sequence to typhoid fever or dysentery, long after the illness and apparent convalescence. In two instances a single ulcer was found in the cæcum itself, and in several instances one or more in "the immediate vicinity of the ileo-cæcal valve." The careful exclusion of any previous disease which might give rise to ulceration of the intestines would certainly seem necessary before concluding that in any given case the patient died of this form of typhlitis.

Among the cases which I have collected, various anomalous ones are recorded. In two cases of disease of the cæcum, the perforation was found to be due to tuberculous deposits; and tubercles were also found in other organs. In two cases, reported by Dr. Charles D. Homans, ulceration of the appendix followed a fall, and it is uncertain how long the foreign bodies (fæcal calculi in both instances) had been present previous to the accident. That such bodies may remain an indefinite time in the appendix, and still more frequently in the cæcum, without giving rise to any appreciable symptoms, is well known. Ulceration of the sigmoid flexure is not, comparatively speaking, very uncommon. When it occurs, the same phenomena are produced as occur in typhlitis from disease of the cæcum. Four cases of this kind may be found in a single volume (xviii.) of the Transactions of the London Pathological Society. In one case of ulceration of the appendix, no tumor was discovered; the swelling being completely masked by the tympanitic condition of the abdomen.

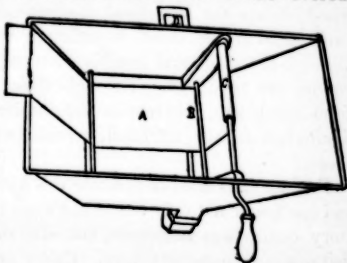
The nomenclature of this disease compels us to use the same term (typhlitis, typhlo-enteritis) to express two morbid processes which differ widely in their fatality, symptoms, duration, and classes of people whom they respectively affect. It would certainly seem proper that a distinctive title should be invented for that usually fatal ulceration of the appendix cæci which generally affects young people, and in the majority of cases the male sex.

A NEW METHOD OF PREPARING PLASTER OF PARIS BANDAGES.

BY EDWARD J. FORSTER, M. D., OF CHARLESTOWN.

THE common method of preparing plaster of Paris bandages by rubbing the plaster into the bandage and rolling it by hand is tedious and untidy. The plaster is scattered about, even when the greatest care is exercised, and the sensation of handling the plaster is decidedly unpleas-

ant. To simplify the preparation of such bandages, and to obviate the objections just mentioned, I had a tinsmith make a pan into which could be inserted the common bandage-roller. When the pan is partly filled with dry plaster and the bandage is rolled, the latter will become covered with the plaster. The pan, with the roller inserted, is well represented in the cut. D shows the sliding part of the bottom (partially drawn out to bring it into view), which tightly closes the opening through which the roller is inserted. The bandage AC is inserted under the rods and rolled a few times upon the



spindle to secure it, as shown in the cut. A large spoonful of plaster is thrown into the pan and upon the bandage at A, and the bandage is then rolled; by keeping it taught, the rod at B, under which it passes, distributes the plaster evenly and forces it into the meshes of the cloth. By the rolling, the plaster is applied to both sides of the cloth, and the coarser the latter is the more plaster it takes up. The ease and neatness with which a bandage can be prepared by this method was demonstrated before the Boston Society of Medical Observation, January 4, 1875.

The roller and pan can be procured of Messrs. Leach and Greene, No. 1 Hamilton Place, Boston.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.

BY F. I. KNIGHT, M. D.

Cheyne-Stokes Respiration.—The peculiarity of Cheyne-Stokes respiration, so called from the fact that Drs. Cheyne and Stokes were the first to call attention to it, may be observed in a variety of morbid conditions, especially towards the close of life. It consists in a complete pause of half a minute or longer, followed by an equally long period of respirations which are at first superficial, then increase in depth, and become even dyspnoëtic; then the respiration becomes superficial again, until finally another pause ensues. I believe that Cheyne, who observed the symptom first, did not offer any theory in regard to it; but Stokes thought it to be due to fatty degeneration of the heart. Traube, however, has shown that it exists in a variety of affections, and con-

siders it to be due to a diminution in the excitability of the respiratory centre, and thinks that the normal amount of carbonic acid is not sufficient to excite inspiration; hence the long pause. As more carbonic acid collects, the pulmonary fibres of the pneumo-gastric are first excited; hence the superficial respirations. Finally the quantity of carbonic acid in the blood is sufficient to excite the respiratory centre through the peripheral sensitive nerve-fibres also, and dyspnoetic inspirations are produced. Through these the carbonic acid is removed from the blood; whereupon the inspirations, on account of a gradual diminution in the irritation, become weaker and weaker, and finally cease.

Filehne¹ has tried to produce this kind of respiration experimentally, and has found not only that diminution in the excitability of the respiratory centre was necessary, but also that it should become less than that of the vaso-motor centre. Under normal conditions the respiratory centre is first excited by a certain amount of irritation (venosity of the blood); then excitation of the vaso-motor centre follows through an increase in the irritation, and only by still greater increase in the irritation do those motor centres become excited from which come suffocation and hæmorrhagic symptoms. In the case of a patient with Cheyne-Stokes respiration, no inspirations are called forth during the pause, on account of the diminution of the excitability of the respiratory centre. With an increase in venosity, the vaso-motor centre is excited, before the irritation is sufficient to excite the respiratory centre. This causes a contraction of the small arteries and of the vessels of the respiratory apparatus, and so a diminution in the flow of blood to the same, whereby the impulse to activity in the respiratory centre is increased, so that it at length performs its function. This reacts now to the stronger irritation, as it would normally to a weaker one, with superficial inspirations. With continued spasm in the vessels of the respiratory apparatus the irritation of the respiratory centre increases, and the inspirations become deeper and deeper, and finally dyspnoetic. By forced breathing the blood is arterialized to a high degree, and the vaso-motor centre is at length quieted. Gradually the cramp of the vessels and also the irritation of the respiratory centre diminish. The respiration becomes more shallow, and ceases altogether as soon as the rich supply of aerated blood arrives in the lungs. The blood now being in a comparatively well arterialized condition, a longer pause must ensue until the blood has again reached such a degree of venosity as to excite the vaso-motor centre. Then the same process is repeated. If Cheyne-Stokes respiration is produced in an animal by the administration of large doses of morphine and a little vapor of ether or chloroform, at the beginning of the pause a

Berliner klinische Wochenschrift, 1874, Nos. 13 and 14; Vierteljahrsschrift für die praktische Heilkunde, ii, 1875.

normal rate of pulse is noticed ; the pulse gradually diminishes during the pause, and sometimes the heart stops altogether. Then the animal begins to breathe and the heart to beat ; the rate of pulsation increases, and at the end of the respiratory period, or at the beginning of a new pause, it is normal again. The impulse of the heart is lengthened by the venosity of the blood ; as soon as the circulation begins to stagnate, the irritation of the respiratory centre becomes abnormally great, the animal breathes, the condition of the blood improves, and the heart begins to beat again. One could thus see that the condition of the heart must have been a substantial support to the real cause of the periodic respiration.

The idea that the checking of the heart's impulse is dependent on an irritation of the vagus centre in the brain is not true ; for after cutting the two vagi, the periodicity of the heart's action ceases, and the heart beats regularly, but the periodicity of the respiration continues, and so is not dependent exclusively upon the periodicity of the heart's action. The determination of blood-pressure threw light on the periodicity of the respiration. During the pause a considerable increase in the blood-pressure occurred, up to the first shallow inspirations ; during the deep inspirations the blood-pressure sank and reached its original height at the end of the respiratory period. At the time of increase in blood-pressure the changes in the pupils which occur in suffocation were noticed. Filehne believes that the periodic obstruction of the heart and the increase of blood-pressure, as well as the periodic venosity of the blood occurring in consequence of insufficient respiration, could be soonest prevented by the employment of artificial respiration. The form of respiration depends, in his opinion, on the excitability of the respiratory apparatus, and on the acting irritation. The respiration is regular as long as both factors remain constant. Periodicity of the respiration occurs when either the excitability of the respiratory apparatus or the amount of the acting irritation experiences a periodic variation.

Traube criticises this theory.¹ He says that all cases in which Cheyne-Stokes respiration occurs have a diminished excitability of the respiratory nervous system. Consequently a greater quantity of carbonic acid is necessary to excite a respiration than under normal conditions ; so the periods lengthen during which the amount of carbonic acid which is necessary to produce an inspiration is collecting in the blood. The necessary amount will be present earliest in the pulmonary arterial system ; therefore the first efficient excitation of the respiratory nerve-centre occurs through the pulmonary fibres of the vagus. We know of these, however, that they cannot produce dyspnoetic inspiration even under the strongest excitation. If also in the

¹ *Berliner klinische Wochenschrift*, 1874, Nos. 16 and 18.

arterial blood of the body the percentage of carbonic acid becomes gradually so great that those sensitive nerve-fibres can be excited which from the skin and other parts of the body are able to stimulate the medulla oblongata into activity, there occur deep and finally also dyspnoëtic inspirations. In consequence, however, of the considerable diminution in quantity which the carbonic acid suffers through the free ventilation of the air-passages, and in consequence of the fatigue which follows upon strong excitation of the respiratory nerve-centre, the inspirations soon lose their dyspnoëtic character, and as the fatigue of the respiratory centre increases more rapidly than the carbonic acid which is collecting again in consequence of the want of dyspnoëa, the inspirations become more and more shallow, and finally null, so that a new pause begins.

Compressed and Rarefied Air.—In a previous report we gave a description of Waldenburg's apparatus, which is too expensive and elaborate for the patient's use at his home. Dr. B. Fränkel, of Berlin, has devised an instrument which is made cheaply and can be obtained by most patients for themselves. It is described in an article recently published by Dr. Rose.¹ It consists of the bellows of an accordion. On one side a metal tube is inserted, two centimetres in diameter, which carries the mouth-piece; the latter may consist of an inflated rubber cushion, similar to a pessary. Fränkel recommends the sitting position for using the apparatus. If the bellows is expanded by drawing the accordion apart, the air contained in it will be rarefied; if it is compressed the air is condensed. If the patient, during the expansion or compression, applies his mouth to the cushion, the effect of the rarefaction or condensation of the air will communicate itself to the intrathoracic air. The apparatus is without valves; as it is very easy to apply or withdraw the mouth from the cushion at the right moment, any such arrangement as valves is not necessary. On the margin of the apparatus there is a centimetrical measure, which plainly indicates by how many centimetres the wooden disks are separated or brought together. This shows the volume of air which has been drawn into or expelled from the apparatus. The apparatus is thirty-five centimetres in height and sixteen in breadth. If the foldings are considered, the bottom area will be five hundred and ten square centimetres. The expansion of the apparatus of one centimetre, according to the measure affixed, would correspond with five hundred and ten centimetres of volume. Fränkel considers the attachment of the dynamometer to his apparatus as unnecessary. All excess of action is avoided, as it is worked by manual force only, Fränkel having found that with his greatest effort he could not condense the air above one eighteenth of an atmosphere, nor increase the power of suction above one twentieth of

¹ The Medical Record, August 28, 1875.

an atmosphere. The patient is sensitive to the amount of pressure and draught upon his lungs, and can regulate both according to his own feelings. Fränkel simply warns his patient against overexertion.

The apparatus is easily transported, and is applicable anywhere (for inducing artificial respiration in cases of chloroform asphyxia, asphyxia of the new-born, poison by oxide of carbon, and other similar emergencies).

(To be concluded.)

ZIEMSEN'S CYCLOPÆDIA.

In Germany the several volumes of this work have not appeared in regular succession, but those which treated of subjects of the greatest interest have been allowed to take precedence of the others. The same plan has been followed with the translation in this country, and accordingly the tenth volume of this valuable series has just been published.¹ It is a matter of regret that the American publishers should have seen fit to omit altogether the publication of the first volume (the second edition of which has been already published in Germany), or, if it is their intention to publish it later, that they did not preserve the same numbering of the volumes as was adopted in Germany.

Professor Schroeder, who has written the whole of the tenth volume, is already favorably known in this country as the author of a most excellent manual on midwifery, and this new work will therefore be received as coming from the pen of one who has already established for himself an enviable reputation as a writer and instructor on the subject of which the volume treats.

After a few pages devoted to the proper methods of making gynecological examinations, in which the author expresses a decided preference for the common tubular speculum, or, where operations are to be performed, for that invented by Simon, Professor Schroeder passes at once to a consideration of the diseases of the uterus. Alluding somewhat briefly to malformations, he dwells at considerable length on atresia of the uterus, and after a sketch of the various forms of hypertrophy and atrophy of that organ, he takes up the subject of the numerous varieties of inflammation which may affect the uterus. He dwells at some length on metritis and endometritis, and then passes to a consideration of the various forms of ulcers and erosions which are so frequently met with in daily practice, and the treatment of which is so troublesome. Uterine misplacements are next taken up, and about fifty pages are devoted to the various methods of treatment now recommended by eminent gynecologists. Uterine fibroids and cancer are carefully described, and then follows a chapter on menstruation. It seems to us that, considering the importance of the subject, altogether too little space is allowed for the treatment of the latter

¹ *Cyclopædia of the Practice of Medicine*. Edited by DR. H. VON ZIEMSEN. Vol. X. Diseases of the Female Sexual Organs. American Edition, edited by ALBERT H. BUCK, M.D. New York: Wm. Wood & Co.: 1875.

topic. Every practicing physician is frequently called upon to treat obstinate cases of menorrhagia and dysmenorrhœa, and it is, therefore, a matter of regret that scarcely a page is given to the former subject, and only some half a dozen pages to the latter. Diseases of the Fallopian tubes and ovaries are more fully discussed by the author. As regards the origin of ovarian cystic formations, Schroeder follows to a certain extent Waldeyer, and accordingly distinguishes two kinds of cystic formation, namely, the dropsy of the Graafian follicle and the cystic tumor or cystoma. The latter he regards as a glandular new formation (adenoma), with a secondary cystic formation arising from the follicles of the ovary, while the former represents a so-called retention cyst. A careful history of the operation of ovariectomy follows, the credit of the first performance of which is given to Ephraim McDowell, of Kentucky, who operated (1809) successfully on a patient who died some thirty years after the operation was performed. As regards the treatment of the pedicle, Schroeder favors the extra-peritoneal method of securing it by means of a clamp, provided that the pedicle is sufficiently long. In other cases he advises that it be tied with catgut in several portions (the larger vessels separately), the ligatures cut short, and the stump allowed to recede. Diseases of the uterine ligaments and of the adjacent portions of the peritoneum follow, chiefly noticeable among which is a most excellent article on peri-metritis. The remainder of the volume is taken up with diseases of the vagina and vulva.

The whole work is admirably done, and is an exponent of the latest German ideas upon a most important branch of medicine. Professor Schroeder may feel well satisfied with the reception the volume is sure to receive at the hands, not only of gynecologists, but of the profession at large. It is to be noted, however, that the work does not contain some of the recent advances made by gynecologists in other countries beside Germany.

The translators and publishers have evidently done their best to see that the present volume is fully up to its predecessors so far as their work is concerned.

ARMY HYGIENE.

If any proof were needed to demonstrate the scientific accomplishments of our army surgeons, and their worthiness of full recognition by their professional brethren in civil life, it might be found in good measure in the contributions to medical literature which issue at intervals from the surgeon-general's office at Washington. The Medical and Surgical History of the War of the Rebellion will at once occur to our readers as a significant illustration of this; and now we have another voluminous publication¹ which does great credit to the medical staff.

The body of the work is devoted to detailed descriptions of the army stations throughout the country, their topography, and the hygienic and endemic

¹ *A Report on the Hygiene of the United States Army, with Descriptions of Military Posts.* Circular No. 8, Surgeon-General's Office. Washington: Government Printing Office. 1875.

influences peculiar to them. Scattered as the army is, from Alaska to Florida, opportunity is afforded to study climatology in all its phases. In this report especial interest attaches to the observations concerning the effects of high altitudes and mountain air upon diseases of the lungs. The opinion of the majority of medical officers is that altitude and a rarefied atmosphere are not in themselves beneficial in cases of phthisis, but that it is the dryness of the air, the exercise, and the out-door life which produce good results.

Interesting as these special reports of the various posts are, and valuable also to medical officers of the army for reference, we have found greater satisfaction in the perusal of the preliminary abstract furnished by Assistant Surgeon J. S. Billings. Dr. Billings has here given a concise review of the returns forwarded from the different stations, and his comments contain many excellent suggestions bearing on the general subject of public hygiene. He discusses in turn matters relating to the habitations of soldiers, their food, their clothing, and their hospitals and medical supplies.

Upon the first point he remarks that scarcely any attention is paid to the proper sanitary construction of army barracks with a view to their effectual ventilation; too much is left to chance and accident. He urges the establishment of bathing conveniences in connection with the quarters, and points his comments with the aphorism that "a dirty man will in most cases be a discontented, disagreeable, and dissolute man; for the condition of his skin has much more to do with a man's morals than is generally supposed." Dr. Billings states his belief that "the service loses by death and discharge on account of overcrowded and badly ventilated barracks and guard-houses about one hundred men every year."

In discussing the topic of army rations, Dr. Billings says that "nothing can be more certain, both theoretically and practically, than that the ration *per se*, that is, without additions by exchanges and purchase, is insufficient." Comparisons are made which show a decided deficiency in the amount and quality of food according to the standard established by Parkes, Letheby, and others.

As to clothing, it is stated that great improvements have been made in the outfit of the army, both in the pattern and in material, and the articles now manufactured are more satisfactory than any which have ever been issued to the troops.

In the matter of hospital construction Dr. Billings is recognized as an expert. Therefore what he writes upon this subject is full of interest to the entire profession. He asserts that the "pavilion plan," which for a time was supposed to be a perfect panacea against all evil, has been found to furnish no security against what is called "hospitalism;" the results of practical trial in recent wars, both in this country and in Europe, have led to the recommendation of the so-called "barrack-hospitals," that is, temporary wooden structures intended to last but ten or twelve years. Upon the matter of ventilation, the author thinks that no system which simply dilutes vitiated air will prevent the transmission of disease. So far as gases are concerned it may be effective; but, as the real dangers of hospitalism probably arise from living solid particles, that portion of the air containing these organic substances, however few in number, will prove prolific in causing disease. Hence the prompt and

complete removal of all organic poisons, "as fast as formed, is the only certain way of preventing their peculiar zymotic effects;" and no "system of hospital construction or ventilation will prevent hospitalism which does not allow of a more minute classification of cases than is now practiced, and in which ample provision is not made for the isolation of cases when needed."

Sanitarians will find many valuable hints in this paper by Dr. Billings. We commend its perusal in full appreciation of its practical merits.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

ARTHUR H. NICHOLS, M. D., SECRETARY.

THE annual meeting of the society was held at the Willard House, Hyde Park, May 12, 1875, the president, DR. EDES, in the chair.

The annual address was delivered by DR. F. F. FORSAITH upon *The Propriety of Legislation with Reference to the Practice of Medicine*. He proceeded to establish the following propositions: First, that direct legislation for the purpose of protecting the people or the profession from quackery is entirely correct in principle, the principle being recognized in the charter of our State society; while in the early history of our commonwealth there were certain statutory laws to secure its enforcement; inasmuch, however, as it has proved so difficult to carry into execution laws of this character, they are now deemed inexpedient by many of our wisest men.

Second, that a thorough education should be demanded of every medical practitioner of whatever school, a result which cannot be brought about by our medical societies, however powerful they may be, but which can be accomplished by the State alone. Such a reform is neither anti-republican nor undemocratic, but merely embodies the principle of self-protection upon which government is always supposed to act.

Third, that experience shows that the greatest success achieved both in the educational and in the practical departments of the science of medicine is to be observed in those countries in which these departments are under the especial control of the state.

Dr. Forsaith showed that in the early history of the profession in England legal protection was afforded against that horde of medical adventurers that are always ready to prey upon a credulous public. In one instance even the indorsement of Queen Elizabeth was not sufficient to cause any abatement of the stringency of the law, so as to allow an uneducated person to quietly practice her small talent, and minister to the curing of disease by means of certain simples, in the application whereof it was thought an especial knowledge had been given her.

The speaker then proceeded to show that in several of the United States cognizance is taken by the laws of attempts by irresponsible and ignorant pretenders to practice the art of healing, and he quoted the statutes now in force

in Tennessee and New York looking towards the suppression of irregular practitioners.

DR. GORDON, of Quincy, reported a case of intussusception occurring at the ileo-cæcal valve, and displayed the specimen. The patient was a young child. The onset of the illness was characterized by severe crying and paroxysmal vomiting, attended by a profuse discharge of loose, bloody dejecta; this was soon afterward followed by the appearance of a tumor in the left hypochondriac region, which extended to the umbilical region. Vomiting was persistent throughout the entire illness, and eventually the ejected matter became chylous, all nourishment being meanwhile declined. Death ensued in about fifty-six hours after the first symptoms were noticed.

SHOULD BOTH ENDS OF A WOUNDED ARTERY BE TIED?

AN animated discussion has recently taken place in the Société de Chirurgie upon the question of the necessity of tying both ends of a wounded artery. *L'Union Médicale* of August 31, 1875, reports that M. Lannelongue gave an account of two cases that had been under the care of M. Cras. The first was a wound of the brachial artery caused by the explosion of a shell; the second, that of the anterior tibial, due to a sharp instrument. In both these cases, although a ligature on the upper end of the divided vessel stopped all bleeding, yet M. Cras did not hesitate to search carefully for the lower end and to tie it, conforming to the dictum of the society, expressed when the subject had been at one time under discussion, that in arterial wounds it was necessary, unless some circumstance absolutely prevented, to search for both ends of the divided vessel and to tie them.

As to the practice of M. Cras in the cases under discussion, and as to the rule as laid down by the society, the reporter, M. Lannelongue, raised a question. "When," said he, the "hæmorrhage has been completely arrested by ligature of the superior end of the vessel, why interfere further? Why trouble the work of hæmostasis whose processes nature has already instituted? Granted, that the ligature of both ends of the vessel is undertaken to avoid the inconveniences and dangers of secondary hæmorrhage; who can say that such a complication would take place? Is it not time enough for interference when necessity demands it? The slight oozing of blood at the beginning of secondary hæmorrhage gives sufficient warning to the surgeon, and it is only in rare cases that frightful secondary hæmorrhages occur suddenly. Of course, when a wound has just been made it is necessary to tie both ends of the vessel when the hæmorrhage persists, but when, in a wound some hours old, bleeding does not continue, it is a wrong practice."

These views of M. Lannelongue were energetically opposed by most of the members who took part in the debate. M. Verneuil, in a previous discussion to which allusion has been made, had much influence in causing the absolute rule of surgical practice to be adopted, that of tying both ends of the wounded

vessel. He would not hesitate in such cases as those of M. Cras, without regard to the suspension of the hæmorrhage, to seek for both ends of the vessel, to stir up (*tourmenter*) the wound, to make it bleed, if necessary, until he found the ends and tied them, in the belief that it was easier for the surgeon, and less dangerous to the patient, to do this than to be obliged at a later period to search for them in a wound which had suppurated, whose tissues were inflamed and veins diseased, at the risk of provoking pyæmic complications or venous thrombosis. The rule, he holds, is an absolute one for wounds less than twenty-four hours old, even if there has been a more or less prolonged suspension of the hæmorrhage, except where the artery is of very small calibre.

MM. Maurice Perrin, Blot, Guyon, Larrey, and Giraldès supported the views of M. Verneuil. M. Desprès, while admitting the necessity of tying both ends of the divided vessel, was sustained by the authority and practice of Nélaton in the statement that a wound in full suppuration presents neither the difficulties nor the dangers intimated by M. Verneuil and others.

M. Tillaux found the rule of M. Verneuil too absolute. He instanced wounds of vessels of small or of medium size, as in wounds of the palmar arch, where compression alone has perfectly arrested hæmorrhage. M. Polailon held similar views.

In conclusion, M. Lannelongue, not to be put down, declared that the question was yet an undecided one. We must gather more facts before making too absolute a rule, especially as the very important researches upon the cause and nature of secondary hæmorrhages, from which M. Verneuil had made his deductions, showed this accident to be due to poisoning of the blood, and to be one of the principal symptoms and manifestations of septicæmia. Now would not this very grave complication of wounds be favored by the irritation and disturbances which the surgeon would inevitably produce in determining in every case of a wounded artery, even in the absence of hæmorrhage, to disturb the wound in searching for both ends of the vessel, thoughtlessly interfering with the salutary work which nature had already begun?

MEDICAL NOTES.

—Two cases of removal of omental tumor from the scrotum, by J. F. Miner, M. D., are reported in the *Buffalo Medical and Surgical Journal* for August, 1875. The first case was that of a healthy young man who from youth had been troubled with a scrotal tumor, which had been supposed to depend upon some affection of the testicle. When an attempt was made to remove the tumor it was found to be omental. The omental mass had probably descended with the testicle in youth and had increased in size as the patient had grown fleshy. It was firmly adherent on all sides to the inguinal canal. A short ligature was thrown around the mass at the lower end of the canal, and the omentum cut away with scissors. The mass when removed weighed two and one half pounds. The patient after a somewhat troublesome convalescence

returned home in about a month. The second case was less successful. It was that of a man sixty-five years old, who weighed three hundred and twenty pounds. Eight years before he consulted Dr. Miner he began to notice an enlargement of the scrotum. The various physicians whom he consulted seemed to arrive at no satisfactory diagnosis. At the time of the surgical operation the mass was found, as in the previous case, to be inclosed in a peritoneal envelope, and to be firmly adherent to the margin of the inguinal canal. A ligature was applied as high up as possible. The removed mass was several inches in length and width, and weighed three and one half pounds. In five days the patient died of peritonitis. Dr. Miner remarks that it is frequently the case that large portions of omentum have to be removed in operations for hernia, but he is not aware of a report of similar cases to the two he describes.

— A new method of performing plastic operations is recommended in the *British Medical Journal* of September 18, 1875, by J. R. Wolfe, M. D., which is certainly important if true. After stating that since the time when Tagliacozzi published his work on plastic operations, some three hundred years ago, but little has been done for the cultivation of plastic surgery, he suggests some important deviations from the rules of the Bologna professor. The latter laid down the rule, which has ever since been considered as the primary law, and the *sine qua non* to the success of the operation, that the flap must retain its connection to the adjacent living structure by a pedicle which is to be severed only after complete union and cicatrization of the raw surfaces. This pedicle has been a source of great embarrassment to surgeons. Dr. Wolfe, from his observations on transplantation of structures from the lower animals and on skin grafting, as well as on plastic operations, has become convinced that the pedicle is not essential, if indeed it contributes at all, to the vitality of the flap. This being once established, we are henceforward free to choose the bit of skin from any part of the body we may find suitable. The chief cause of failure in plastic operations he finds to be in the subcutaneous structures. If we wish a skin flap to adhere to a new surface by first intention or agglutination, we must be sure that it is cleared of all areolar tissue, and properly fixed in its new place. The method is illustrated by the report of the formation of the lower eyelid with skin from the fore-arm.

REPORT OF SURGICAL CASES AT THE BOSTON CITY HOSPITAL.

The Aspirator in Synovitis. — CASE I. A laborer, thirty-five years of age, while working in a trench, April 21, 1875, was hit by a bank of frozen earth falling in upon him. The injury was received upon the right leg and knee. When the patient entered the hospital a few hours after the accident, the right knee-joint was found to be distended with fluid. The symptoms

were pain, swelling, fluctuation, and floating patella. The upper third of the leg was severely bruised, but no fracture was discovered. All movements of the joint were very painful. The limb was placed upon a ham-splint, and an evaporating lotion applied.

The next day the symptoms were the same. A dozen leeches were applied to the joint; they drew freely. They were followed by some relief to the pain, but no decrease of the swelling.

April 25th. The distention of the sac still continuing, Dr. Ingalls punctured it with the aspirator and drew off two ounces of fluid composed of serum, blood, and fat.

May 2d. The joint having refilled, it was again aspirated, the needle entering the synovial cavity to the outside of the patella. Five and a half ounces of blood and pus were withdrawn. The character of the fluid was determined by the microscope. Compressed sponge was firmly bandaged upon the joint, and kept wet.

May 16th. The relief from the last tapping was marked and permanent. Swelling and pain were much diminished. No fluid was obtained with the aspirator on this day, although a small amount was apparently present. Compressed sponge was continued.

May 28th. There remained very little swelling in the joint. No fluid could be detected. The patient walked well, without pain; he was discharged, nearly well.

CASE II. E. P., aged sixteen years, domestic, entered the hospital April 30, 1875. Two days before, she fell, injuring her wrist and probably her left knee, although she had no recollection of having done so. When seen by Dr. Ingalls, the left knee was red, tender, swollen, fluctuating, and apparently full of fluid. The patella floated. Movements of the joint were painful. The treatment comprised the application of a ham splint, and local blood-letting by leeches.

May 2d. The swelling remained the same. The joint was aspirated, and two ounces of clear serum, greenish and odorless, were obtained. Compressed sponge was applied to the knee.

May 4th. No swelling or pain remained. No signs of fluid on the joint. The sponge and bandage were continued.

May 6th. No swelling; the patient can move the joint freely without pain.

May 12th. The patient is walking about the ward; she has no pain or swelling in the knee.

May 17th. Discharged, well.

CASE III. April 10, 1875. The patient, a hostler, thirty-four years of age, was kicked on the right knee the evening before his entrance, by a horse which he was grooming. He walked home with assistance. During the night the knee became swollen and painful. He came to the hospital in the afternoon with his right knee-joint swollen, tender, and painful. The patella floated, and receded on pressure. No signs of fracture were found. Treatment, ham splint and evaporating lotion.

April 12th. The joint was no better. Twelve leeches were applied to the knee; it bled freely.

April 13th. Less pain and swelling.

April 18th. No pain. Swelling nearly gone.

April 24th. Patient walks without difficulty. Discharged, relieved.

May 14th. Patient was readmitted two days ago with the same joint full of fluid, and suffering considerable pain. The synovial sac was aspirated just above and to the outside of the patella, and four ounces of sero-sanguineous fluid were removed. Compression by means of wet sponge and bandage was applied.

May 19th. No return of swelling or pain.

May 24th. The swelling has nearly disappeared. No fluid to be detected in the joint. The patient walked down three flights of stairs and out into the yard without any ill effects; he has no pain in the joint even in walking. Compression continued.

June 3d. Discharged, well.

September 23d. There has probably been no return of the affection, as nothing has been heard from the patient; he promised to report any renewal of the trouble.

Aspiration of the knee has been performed a considerable number of times in this hospital by the surgeons. The results have generally been beneficial, though sometimes transient. So far as we know, they have never been injurious.

The operation having been found to be comparatively safe, the question arises whether cases of fluid in the joints recover any sooner when treated by one or more tapplings, than by the ordinary methods. M. Dieulafoy reports twenty-two cases of effusions into the knee treated by aspiration. He divides them into three classes: (1) traumatic cases cured by from one to three aspirations, occupying from three to eight days; (2) acute hydrarthroses, rheumatic, etc., which require from four to six punctures during a week or fortnight; (3) old cases of dropsy of the joints, which sometimes require two aspirations daily. "They are generally cured in the third week." Most of the noted French surgeons who took part in the debate upon this report of Dieulafoy's strongly opposed the treatment by puncture and aspiration of all kinds of hydrarthroses, except in some chronic cases where the fluid had been present over two months. They claimed that the operation was not always safe, and that a large majority of these affections could be cured as quickly and easily by the ordinary methods as by aspiration. And, furthermore, "that in a procedure possessed of so little efficacy as M. Dieulafoy's, even rare accidents ought entirely to proscribe its employment."

Whether there be a tinge of professional jealousy in this wholesale denunciation of joint-aspiration, it is not for us to determine. But the operation has been done times enough in this hospital to show that it is often beneficial, and very seldom if ever injurious. It will be noticed that the time required for a sufficient recovery in the above cases to allow the patients to resume their occupation was seventeen, thirty-seven, and fifty-four days respectively. The second case was well fifteen days after the single tapping; an unusually quick recovery. Twelve days after the single aspiration the third patient walked down three flights of stairs and up again without any pain or diffi-

culty. Such results rarely follow the usual modes of treating these acute joint affections. Six or eight weeks are often required to get a patient with acute synovitis upon his feet, and even then a small amount of fluid or enlargement of the joint is apt to remain.

It seems reasonable to suppose, and the above cases tend to show, that when the process of effusion has nearly or quite subsided, and absorption is slow in its progress, removing the fluid from the joint with a small, hollow needle hastens the recovery. That merely puncturing a joint stops the secretion of the synovial membrane is by no means proved; and moreover, relapses are probably as frequent in cases treated by aspiration as in any others. Yet the operation is a valuable addition to our methods of treating effusions of fluid into the knee-joint. It is safe. It hastens recovery in many cases. It may be used in acute as well as in chronic cases, whatever may be the character of the fluid in the joint. And it may be repeated as often as necessary.

GEORGE W. GAY, M. D.

WEEKLY REPORTS OF PREVALENT DISEASES.

MESSRS. EDITORS,—Three principal objects are evidently aimed at in these weekly returns. One is the deciding of the points at which certain diseases originate; the second is in great degree dependent upon the first, the investigation of the causes of disease; the third, dependent upon the other two, is the prevention of diseases. There is a fourth and most excellent reason for publishing these reports, not only in medical but in popular journals: namely, to relieve the unnecessary fears of the public.

It would be well to call the attention of the public to these reports in some very positive manner, as it would go far towards quieting uneasy imaginations and forebodings. Our profession is constantly informed that scarlet fever is raging in this town or that, and that the schools are shut in another community because of the great prevalence of cerebro-spinal meningitis. Twice within a week I have been informed of the great prevalence of diphtheria in Boston and in Swampscott. In looking over the weekly report of prevalent diseases, however, I find the following as its closing sentence: "In the whole State, all the diarrhœal affections, together with typhoid fever, have increased; *all the other diseases have declined.*" This not being satisfactory to the person with whom I was looking it over, because diphtheria was not mentioned, and it was "*probably only on the decline,*" we went over the report concerning different sections of the State. To our surprise we read, "The order of relative prevalence of acute diseases in the State at large is as follows: diarrhœa, cholera morbus, cholera infantum, dysentery, typhoid fever, rheumatism, scarlatina, whooping-cough, bronchitis, *diphtheria*, influenza, pneumonia, measles, — *the prevalence of the last five being scarcely worth mentioning.*"

It is worthy the attention of the public to know how these reports are made up. They are useful to us professionally, and the public may make them useful also. Medical men in nearly every city and town in the State, hundreds in all, are furnished with blanks, which on Friday night in each week they fill

out with the names of the acute diseases prevalent in their respective neighborhoods, and mark them as "mild" or "severe," in different columns. These reports are on Saturday transmitted to Dr. F. W. Draper, the registrar, who draws up the bulletin as published every week. The State, according to his report, is divided into sections, as follows; Berkshire, Valley, Midland, North-eastern, Metropolitan, and Southeastern; and any one who is interested in knowing the truth from reliable reports would do better to read these weekly returns than to listen to the croakers, who are about as numerous as the diseases.

But looking at the report of Dr. W. L. Richardson, the Acting Secretary of the State Board of Health, for the same week, which precedes Dr. Draper's bulletin, and which is the report of the *deaths* from prevalent diseases in the State, I find the name *diphtheria* is not mentioned. This disease cannot therefore be very abundant. In this opinion I am confirmed when I see that he has thought it important to say that in the whole State there were "six deaths from cerebro-spinal meningitis; from cholera infantum (seventeen cities) 147 deaths; from consumption (thirteen cities) 53 deaths; from diarrhoea (nine cities) 25 deaths; from dysentery (eight cities) 23 deaths."

It would be well for people to quiet their fears by reading these weekly reports, and exercising their reasoning powers upon the other reports. When they hear that there have been six or eight fatal cases of typhoid fever in a certain street, they would do well to remember that in that street is probably the cause of the disease. It proves nothing against the health of the city in general, nor against that of the State at large, when they hear that a certain physician is having under his care so much dysentery that he is seeing nearly a hundred cases a day. They would do well to calculate how long it takes the poor fellow to go from house to house to see a hundred, and pity the poor people who are forced to employ such a hard-pressed doctor that without allowing himself time to eat, drink, or sleep, he has but fourteen minutes and forty seconds for each. They would do well to relieve him of a part of his burdens if he claims to be so busy, for he certainly must neglect his other cases.

There is a foolish habit of calling every red skin scarlatina, and every little soreness of the throat diphtheria, and every little headache cerebro-spinal disease; and there are men in the medical profession who encourage the habit. They probably have an object.

CHARLES E. BUCKINGHAM, M. D.

Boston, September 9, 1875.

WEEKLY BULLETIN OF PREVALENT DISEASES.

THE following is a bulletin of the diseases prevalent in Massachusetts during the week ending October 2, 1875, compiled under the authority of the State Board of Health from the returns of physicians representing all sections of the State:—

Only two diseases can be said to be prevalent in the State at large — typhoid fever and diarrhoea; both are mild in type, and are declining. The subsidence

of cholera infantum, cholera morbus, and dysentery has been remarkably sudden and noteworthy. Diphtheria is somewhat less prevalent than it was a week ago; it is most common in the Connecticut Valley, in the vicinity of Boston and in the city itself, and upon the Cape, avoiding the high lands of Berkshire and of Worcester County. Under the various designations of "influenza," "acute nasal catarrh," "autumnal catarrh," "colds," and "bronchitis," very many towns and cities report the presence of an epidemic catarrhal trouble; it is most common in the eastern sections of the State, but extends somewhat into the midland and western districts; several observers note the coincidence with it of the epizootic catarrh. The summary for each section is as follows:—

Berkshire: Typhoid fever, diarrhoea, cholera infantum.

Valley: Typhoid fever, diarrhoea, rheumatism, dysentery, influenza. Remittent fever in Springfield.

Midland: Diarrhoea, typhoid fever, rheumatism, pneumonia, bronchitis, dysentery, influenza.

Northeastern: Typhoid fever, diarrhoea. Very little sickness.

Metropolitan: Diarrhoea, typhoid fever, bronchitis, influenza.

Southeastern: Typhoid fever, diarrhoea.

In the State at large the order of relative prevalence is as follows: Typhoid fever, diarrhoea, bronchitis, dysentery, influenza, cholera infantum, diphtheria, cholera morbus, rheumatism, pneumonia, scarlatina, whooping-cough, croup; all are low in the scale except the first two.

F. W. DRAPER, M. D., Registrar.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPT. 25, 1875.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	568	28
Philadelphia	800,000	257	17
Brooklyn	500,000	266	28
Chicago	400,000	179	24
Boston	342,000	196	30
Cincinnati	260,000	97	19
Providence	100,700	47	24
Worcester	50,000	19	20
Lowell	50,000	23	24
Cambridge	48,000	17	18
Fall River	45,000	37	43
Lawrence	35,000	23	34
Lynn	33,000	18	28
Springfield	31,000	11	18
Salem	26,000	8	16

Normal Death-Rate, 17 per 1000.